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PERMIT TO OPERATE

COMPANY NAME

TESORO REFINING AND MARKETING CO
P.O. BOX 817,
WILMINGTON, CA 90748-0817

EQUIPMENT LOCATION

2101 E. PACIFIC COAST HIGHWAY
WILMINGTON, CA 90744
Facility ID#: 800436
Facility Type: NOx & SOx RECLAIM (Cycle 1), Title V

EQUIPMENT DESCRIPTION

Additions are shown as underlined and deletions are shown as ~~strikeouts~~.

Section D: Permit to Operate


Equipment	ID No.	Connected To	RECLAIM Source Type / Monitoring Unit	Emissions and Requirements	Conditions
PROCESS 15: STORAGE TANKS					
SYSTEM 1 : FIXED ROOF TANKS					S13.7
STORAGE TANK, FIXED ROOF, TANK 80035, 80,000 BBL; DIAMETER:117 FT; HEIGHT:41 FT, DIESEL OIL, INTERMEDIATE GAS OIL A/N: <u>498994, 502823</u>	D584				B22.13, C1.50, K67.2, <u>E336.2</u>

- | | |
|---|--|
| * (1) Denotes RECLAIM emission factor | (2) Denotes RECLAIM emission rate |
| (3) Denotes RECLAIM concentration limit | (4) Denotes BACT emission limit |
| (5)(5A)(5B)Denotes command and control emission limit | (6) Denotes air toxic control rule limit |
| (7) Denotes NSR applicability limit | (8)(8A)(8B)Denotes 40 CFR limit(e.g. NSPS, NESHAPS,etc.) |
| (9) See App B for Emission Limits | (10) See Section J for NESHAP/MACT requirements |

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

COMPLIANCE RECORD REVIEW

A review of the AQMD Compliance Database showed 14 Notices of Violation (NOV) and Notices to Comply (NC) issued to Tesoro in the past two years (02/01/2008-02/01/2010). All notices are either closed or in compliance status. A summary of the NOV and NC is provided in Attachment 2.

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BACKGROUND AND PROCESS DESCRIPTION

Tesoro submitted application no. 498994 on May 20, 2009 to permit this storage tank. The permit at that time showed that this tank was subject to condition E336.2, which required that this tank to connect to vapor recovery system under normal operating conditions. The company had submitted the storage tank application 498994 at the direction of the District. During the District review of Tesoro's RECLAIM C/O permit, the District had discovered that Tesoro's Storage Tank no.80035 (D584) was permitted as part of the refinery's Hydrocracker Unit, not as device that requires individual permit. See Attachment 3 which contains a copy of the Hydrocracking Unit 's permit which shows that the tank as part of the Hydrocracking permit. Upon discovering this discrepancy, The District immediately notified Tesoro to submit Permit to Operate/ no Permit to Construct (PO no PC) application to permit it as individual permit (see the attached e-mails in Attachment 1).

Prior to approval of A/N 498994, on July 17, 2009, Tesoro requested the District to make a change to the permit application for this tank, requesting the District to remove condition E336.2 from this tank. The final permit was issued on August 4, 2009 to allow Tesoro not to vent this tank to vapor recovery system, and condition E336.2 was removed. Condition B22.13 was imposed to limit this tank to only store products which have vapor pressure less than 0.1 psia under actual storage conditions and limited the throughput in condition C1.50

Tesoro submitted this application(A/N502823) on October16, 2009 to remove condition B22.13 and reinstate condition E336.2 for this device. Tesoro wants the flexibility to store material with VP>0.1 psia, and they may not be able to comply with condition B22.13. They have agreed to vent this tank to VRS as was previously permitted by reinstating condition E336.2. According to Tesoro, they did not take Tank 80035 off of vapor recovery and have not made any changes to the tank. It is still in the same service and is connected to vapor recovery system. (see the e-mail in Attachment 1). The contents of the tank is the same , Intermediate Gas Oil, which was the product that was stored in the tank previous to the most recent permit change in August 2009 to store diesel product and to disconnect vapor recovery system under application no. 498994.

Under the previous application 498994, the tank was subject to New Source Review(NSR) requirements due to changing the method of operation and there was 1 lb/day of ROG emissions increase from baseline. However, no physical modification was made to this tank since the time the P/C was issued in August 2009. I discussed this issue with my supervisor Tran Vo, we decided that since this tank was previously exempt under Rule 219 until their exemption was removed, Rule 1313(a) exempts the tank from the District's NSR requirements. In order to allow Rule 1313 exemption, the previous application needs to be cancelled. For A/N 498994, the type code will be changed from 31 to 21, then, the application will be canceled. (See the attached e-mail to IM to change the application code in Attachment 1)

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NSR Permit History

This subject tank has no permit history as individual permit unit. At one time, the tank was not permitted as individual unit as required by Rule 219 and Rule 301, instead, the tank was permitted along with Tesoro (Equilon & Texaco Refining previously) Hydrocracking Unit in 1997. See Attachment 3 which contains a copy of the Hydrocracking Unit's permit which shows that the tank as part of the Hydrocracking permit.

Table 1 lists the application submitted along with the equipment description and the proposed Permit Limit.

Table 1- Proposed Equipment Description & Permit Limit

<i>A/N</i>	<i>Equipment Description</i>	<i>Proposed Permit Limit</i>
502823	Storage tank, No. 80035, Fixed Roof connected to vapor recovery system	>0.1 psia

See attachment 4 for MSDS sheet

FEE ANALYSIS

All fees shown in Table 2 have been paid by the applicant.

Table 2- Summary of Fee Analysis

<i>A/N</i>	<i>Equipment Description</i>	<i>BCAT/CCAT</i>	<i>Fee Schedule</i>	<i>Fee Type</i>	<i>Fee</i>	<i>XPP Fee</i>	<i>Total Fee</i>
502824	Permit Amendment	555009 (BCAT)		FP – RECLAIM/Title V Minor Amendment	\$1687.63		\$1687.63
502823	Storage tank	300902	C	P/O	\$1,758.90	\$879.45	\$2,638.35
Total							\$4,325.98


EMISSIONS CALCULATIONS

The subject tank was previously exempt under District's Rule 219(m)(4). As previously exempt device, the tank does not have emissions baseline. Although this tank is exempt from the District's New Source Review (NSR) regulations by Rule 1313(a), the District used the throughput data for the past 2 years from Tesoro to quantify the amount of emissions. The calculated emissions will be used as baselines for the tank. See Table 3 below. Attachment 5 contains the detailed Tanks 4.09 Calculations

Table 3-Emissions Summary

<i>Tanks No.</i>	<i>Product</i>	<i>Throughput (barrels/month)</i>	<i>Emissions using EPA Tanks Program lbs/yr</i>	<i>Emissions using EPA Tanks Program lbs/day</i>	<i>Emissions using EPA Tanks Program lbs/hr</i>
80035 D584	Gas Oil or TSO Diesel oil (0.1 psia)	583,333	722.12lbs/year	2 lbs/day	0.0836 lb/hr

- Controlled Emissions are calculated applying 99% VOC control efficiency.

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RULES EVALUATION

Regulation II- PERMITS

Rule 212: Standards for approving and Issuing Public Notice (Amended Nov. 14, 1997)

- 212 (a) The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code of these rules. This storage tank is not new or modified equipment. This tank was previously exempt under District Rule 219. Therefore, this Rule is not Applicable.

Regulation IV PROHIBITIONS

Rule 401: Visible Emissions

Visible emissions are not expected under normal operating conditions of the tank.

Rule 402: Nuisance

No Nuisance complaints are expected provided that the operation is conducted according to design. Compliance with Rule 402 is expected.

Rule 463 Organic liquid storage


The District Rule 463 requirements only apply to storage tanks with certain capacities and vapor pressure of the tank content. For tanks with a capacity greater than 39,630 gallons, the District's Rule 463 would only have requirements that apply if the liquid content has a vapor pressure greater than 0.5 psia. For a fixed roof tank equipped with a vapor recovery system shall comply with the following requirements:

(A) Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a vapor-tight cover which shall be closed at all times except during gauging or sampling. The roof of such tank shall be properly maintained to be vapor tight with no holes, tears or uncovered openings.

(B) All piping, valves and fittings shall be constructed and maintained in a vapor-tight condition, in accordance with requirements of other District rules for such equipment.

(C) For purposes of this paragraph, the efficiency of a vapor recovery system shall be determined by making a comparison of controlled emissions to those emissions which would occur from a fixed cone roof tank holding the same organic liquid without a vapor control or vapor recovery system. The vapor recovery system shall have an efficiency of at least 95 percent by weight.

Compliance with Rule 463 is expected with proper recordkeeping and inspections.

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Regulation IX- NEW SOURCE PERFORMANCE STANDARDS

Subpart K,Ka,Kb - Standards of Performance for VOL Storage Vessels for Which Construction, Reconstruction, or Modification.

The contents of the subject tank have vapor pressure below the applicability threshold for vapor pressure. Therefore, Subpart K, Ka, Kb is not applicable to the tank. Not Applicable

Regulation X -NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

Subpart CC: National Emissions Standards for Hazardous air Pollutants for Petroleum Refineries

The subject tank is storing liquids with a total hazardous air pollutants concentration below 4.0 wt% (see the MSDS submitted with application). Therefore, Subpart CC is not applicable.

Regulation XI - SOURCE SPECIFIC STANDARDS


Rule 1149: Storage Tank Cleaning and degassing

This Rule has requirements for tank cleaning and degassing operations. Emissions from above ground tanks are required to be controlled by one of the following methods: liquid balance, negative pressure displacement and subsequent incinerations, vapor condensation with a refrigeration system, or any other method which controls VOC by at least 90%. The subject tank will only be permitted to store liquid contents with vapor pressure below Rule 1149's applicability limit for vapor pressure which is below 0.5 psia. Not Applicable

Rule 1178: Further reductions of VOC Emissions from Storage Tanks at Petroleum Refineries

This Rule applies to facilities for which VOC emissions exceed 20 tons in their Annual emissions Report (AER) for any year starting with 2000. Tesoro AER for the year 2000 exceeded 20 tons VOC. The rule requires that, no later than January 1, 2007, the operator shall equip each fixed roof tank containing organic liquids with true vapor pressure greater than 0.1 psia with an emission control system meeting the following requirements:

- The tank emissions are vented to an emission control system with an overall control efficiency of at least 95% by weight or the tank emissions are vented to a fuel gas system.

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- Any tank gauging or sampling device on a tank shall be equipped with a vapor tight cover which shall be closed at all times, with no visible gaps, except during gauging or sampling.
- The roof of such tank shall be properly maintained in a vapor tight condition with no holes, tears or uncovered opening. All openings on the roof shall be properly installed and maintained in a vapor tight condition at all times.
- The operator shall equip each fixed roof tank with pressure-vacuum vents that shall be set to the lesser of 10% below the maximum allowable working pressure of the roof or 0.5 psig.
- The operator shall maintain pressure-vacuum vents in a vapor tight condition at all times except when the operating pressure of the fixed roof tank exceeds the manufacturer's recommended setting.

The tank complies with all the above requirements of this rule.
System condition S13.7 assures continued compliance with this Rule

Regulation XIII: **NEW SOURCE REVIEW**

Tesoro storage tank 80035 is previously exempt under the District's Rule 219 until their exemptions were removed. Because the tank lost the exemption, Rule 1313 exempts the tank from the District's NSR requirements.

Regulation XIV - TOXICS AND OTHER NON-CRITERIA POLLUTANTS

Rule 1401: **New Source Review of Carcinogenic Air Contaminants**


This rule requires permit applicants to assess the cancer risks due to the cumulative emission impacts of new/modified sources in their facility. Tesoro's storage tank was previously exempt under the District's Rule 219. As a result, the storage tank is exempt from Rule 1401 under (g)(1)(D).

Reg XX: **REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)**

Tesoro is a RECLAIM facility. Therefore, it is subject to Reg XX. Since this equipment does not emit RECLAIM pollutants, there are no RECLAIM requirements applicable to the storage tank.

Reg XXX: **Title V Permit**

Tesoro Refinery is currently subject to Title V. Since the proposed changes for this tank does not result in an increase in emissions of ROG or HAP pollutant and is not subject to NSPS, this revision will be considered a minor revision to the existing Title V permit. As a minor revision, the permit is subject to a 45 day EPA review and comment period.

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RECOMMENDATIONS

A permit to operate is recommended subject to the following conditions:

PROCESS CONDITIONS

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
Benzene	40CFR61, SUBPART	FF

[40CFR 61 Subpart FF, 12-4-2003]

[Processes subject to this condition : 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15]

SYSTEM CONDITIONS

S13.7 All devices under this system are subject to the applicable requirements of the following rules or regulations:

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
VOC	District Rule	463
VOC	District Rule	1149
VOC	District Rule	1178


For Rule 463 applicability, only subdivision (d) in the March 11, 1994 amendment, or equivalent requirements in the future amendments, shall apply to domed external floating roof tanks. This does not preclude any requirements in Rule 1178.

[RULE 1149, 7-14-1995; RULE 1149, 5-2-2008; RULE 1178, 4-7-2006; RULE 463, 5-6-2005]

[Systems subject to this condition : Process 15, System 1 , 2 , 7]

DEVICE CONDITIONS

B. Material/Fuel Type Limits

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B22.13 ~~— The operator shall not use this equipment with materials having a(n) true vapor pressure of 0.1 psia or greater under actual operating conditions.~~

~~The operator shall determine the flash point of the organic material stored using ASTM Method D-93. Those materials having a flash point less than 100 degrees F as determined by this test will be considered as having a true vapor pressure of greater than 5 mmHg (0.1 psi) absolute under actual storage conditions.~~

~~{RULE 1178, 4-7-2006}~~

~~{Devices subject to this condition : D584}~~

C. Throughput or Operating Parameter Limits

C1.50 ~~The operator shall limit the throughput to no more than 2,450,000 gallons(s) in any one calendar month.~~

~~The operator shall measure and record the liquid volume of the tank using an automatic tank level gauging system(ATLGS). The ATLGS shall measure the tank liquid level and calculate the liquid volume using the tank strapping tables. The volume measurements shall be recorded electronically once every 15 minutes.~~

~~The operator shall calculate the throughput in barrels using the total one-way (increasing) volume movement on a monthly basis. The calculation will be based on the sum of the increasing volume readings.~~

~~The ATLGS installed shall be verified once per quarter by comparing against a manual tank level measurement. If the ATLGS differs from the manual tank level measurement by more than 1.0 inch or 0.8%, whichever is greater, the ATLGS shall be repaired and back to service within 10 days.~~

~~In the event of a failure or routine maintenance of the ATLGS, the ATLGS shall be repaired and put back into service within 10 days of the time that the ATLGS failed or was removed from service for maintenance.~~


~~While the ATLGS is being repaired or maintained, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to time that the ATLGS went out of service.~~

~~The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.~~

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~~{RULE 1303(b)(2)-Offset, 5-10-1996}~~

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~~[Devices subject to this condition : D584]~~

E. Equipment Operation/Construction Requirements

E 336.2 The operator shall vent the vent gases from this equipment as follows:

All vent gases under normal operating shall be directed to a vapor recovery system consisting of compressors D641, D642, D643 AND OR D644, which can be operated independently to maintain a system vacuum that efficiency collects all vented gases.

This equipment shall not operated unless the vapor recovery system is in full use and has a valid permit to receive vent gases from this equipment

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D458, D459, D460, D461, D462, D466, D467, D520, D521, D526, D531, D533, D534, D544, D546, D547, D548, D550, D551, D552, D553, D554, D555, D556, D557, D558, D559, D560, D561, D562, D563, D564, D565, D566, D567, D569, D571, D572, D573, D574, D575, D576, D577, D578, D579, D589, **D584**, D592, D593, D594, D595, D596, D597, D598, D599, D600, D602, D603, D604, D606, D607, D608, D611, D613, D614, D615, D616, D617, D619, D620, D622, D623, D624, D625, D626, D627, D628, D631, D633, D634, D636, D637, D639, D640, D807, D808, D809, D982, D998, D1001, D1002, D1500]


K. Record Keeping/Reporting

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Throughput and vapor pressure of stored liquid.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 463, 5-6-2005]

[Devices subject to this condition : D520, D521, D531, D533, D534, D543, D544, D546, D548, D549, D554, D555, D556, D558, D559, D560, D562, D563, D565, D566, D567, D568, D569, D571, D572, D573, D575, D576, D577, D578, D579, D581, D582, D583, D584, D585, D586, D587, D588, D591, D592, D593, D594, D596, D597, D598, D599, D603, D604, D605, D609, D611, D612, D613,

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D614, D615, D616, D617, D619, D620, D622, D623, D625, D626, D627, D628, D629, D631, D632, D633, D634, D635, D636, D637, D640, D647, D648, D649, D650, D651, D652, D653, D654, D655, D656, D658, D660, D1001, D1002, D1095, D1500, D1555]